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(54) MEMORY MODULE

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a memory module, wherein a plurality of memory chips are mounted on a module substrate and the delay times of respective wirings are made approximately constant.

SOLUTION: A memory module 10 has a module substrate 2, on which a plurality of bare chips 1 for memory are mounted. At the vicinity of the center of the module substrate 2, pads 4 are formed along the longitudinal direction. The bare chips 1 for memory are mounted by every two pieces on both sides, so as to hold these pads 4. The lengths of bonding wires 5 on the module substrate 2 are made approximately equal. Furthermore, the lengths of the wiring patterns connected to the respective bonding wires 5 are also made approximately equal. Therefore, the wiring lengths from pads 3 of the bare chips 1 for memory to outer connecting terminals 8 can be made approximately equal. The dispersion of the wiring delay amounts from the pads 3 to the outer connecting terminals 8 can be eliminated.